

# DHS Science and Technology Directorate

## Next-Generation Incident Command System (NICS)

### Why It's Needed

When disaster strikes, responders from near and far come together to work together. But they can't collaborate if they can't coordinate.

### What Is It?

The Next-Generation Incident Command System (NICS), an on-line incident map that provides rich, timely situational awareness to responders of every agency. But NICS is much more than a map. It's a virtual white board where responders can team up, pool resources, and plot strategies. Developed by MIT Lincoln Laboratory in partnership with the California Department of Forestry and Fire Protection (CAL FIRE), the Web-based software is funded by the Department of Homeland Security's Science and Technology Directorate (S&T).

### How Does It Work?

During an incident, NICS manages and distributes real-time feeds of vehicle locations, airborne images, video, weather, critical infrastructure, and terrain. These feeds are integrated as selectable layers onto a map using a geographical information system. Any credentialed responder can mark up the map or type a message on the whiteboard below it, and the feeds are available for external tools to promote interoperability.

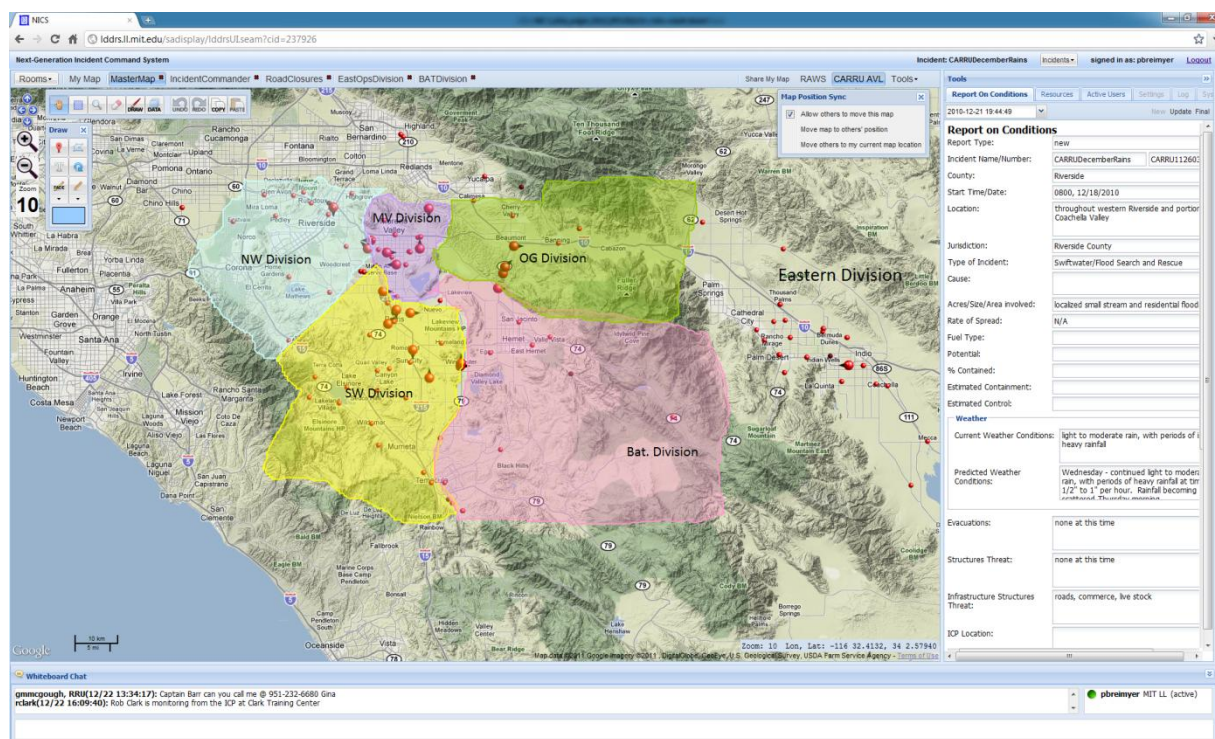
### The Real Value

NICS lets cash-strapped agencies do more with less. Just ask CAL FIRE: during the 2010 fire season, CAL FIRE used NICS to evaluate the dangers of scores of wildland fires that raged through Southern California. For example, during the "Cowboy" fire, which occurred September 2-6, 2010, in San Diego County and across the Mexican border, NICS provided the first official incident map and was used to brief the media. More than 300 first responders across 13 organizations have been trained in the use of NICS (e.g., California Emergency Management Agency, Los Angeles County, Orange County, Riverside County Sheriff's Office, and Riverside County Office of Emergency Services) and additional personnel are being trained every week. According to CAL FIRE, fire fighters aren't battle-ready until they're NICS-trained.

### Next Steps

In 2012, a Southern California testbed will be built to operationalize NICS for all-hazard response regionally. By 2013, NICS will be furnished to other regions, in California and beyond.

At S&T, NICS is one piece of a suite of open-source software we're helping the nation build and deploy so incident responders can plan together, watch together, work together.



**Figure 1:** When vast swaths of Riverside County, Calif., flooded, firefighters and police used NICS' map and drawing tools to coordinate road closures, evacuations, and rescues. They planned their response on a virtual white board (bottom).



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To learn more about NICS,  
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